

Work Order ID 140959

140959

Page 1

January 26, 2016 11:48:42 AM

Item ID: D3278-041 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Support Assembly
Start Date: 3/29/16 Start Qty: 30.00 *30* Cust Item ID:
Required Date: 2/5/2016 Req'd Qty: 30.00 *30* Customer:
Reference: 4/1/16

Approvals: Process Plan: SH Date: 20160126 Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3278	Rev C

100	Small Fab	0.00							
100									
Small Fab	Memo	0.02							
Small Fab	Rivet spacers with support as per Dwg D3278.								

110	QC5- Inspect part completeness to step on W/O	0.00							
110									
QC	Memo	0.01							
Quality Control									

120	Small Fab	0.00							
120									
Small Fab	Memo	0.02							
Small Fab	Assemble support as per Dwg D3278.***DO NOT TIGHTEN BOLTS***Identify as D3278-041								

DAS
36
9-89

DAS
30
9-89

DAS
36
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			OTHER : ☐	

Work Order ID 140959

140959

Page 2

January 26, 2016 11:48:42 AM

Item ID: D3278-041 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Support Assembly
 Start Date: 1/26/2016 Start Qty: 30.00 *30* Cust Item ID:
 Required Date: 2/5/2016 Req'd Qty: 30.00 *30* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.01			DAS 30 9-89	20			MAR 30 2016
140 *140* Packaging Packaging	Identify as per dwg & Stock Location: <u>51822</u> Memo	0.00 0.01				20			MAR 30 2016 DAS 8 9-89
150 *150* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.05				MCS			MAR 30 2016

MCS MAR 30 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation		Disposition			

Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	FAULT CATEGORY Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER : ☐			

January 26, 2016 11:48:47 AM

Parent Item: D3278-041

Parent Item Name: Support Assembly

1 40959

D3278-041

Start Date: 1/26/2016

Required Date: 2/5/2016

Start Qty: 30.00

Required Qty: 30.00

Comments:

IPP: A04.04.19New issueKJ/JLM

IPP B 07.08.21 Chg rivet per PAR185 EC Verified by: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3278-1		Manufactured	No			100	Each	1.0000	1	30			DAS 36 9-89
D3278-1									**			16/03/29	
Support													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				1					
					137173			1					
D3278-2		Manufactured	No			100	Each	0.0000	1	30			DAS 36 9-89
D3278-2									**			16/03/29	
Support													
D3278-3		Manufactured	No			100	Each	1.0000	1	30			DAS 36 9-89
D3278-3									**			16/03/29	
Spacer													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				1					
					136963			1					

Picklist Print

January 26, 2016 11:48:47 AM

Page 2

Work Order ID: 140959

Parent Item: D3278-041

Parent Item Name: Support Assembly

140959

D3278-041

Start Date: 1/26/2016

Required Date: 2/5/2016

Start Qty: 30.00

Required Qty: 30.00

MS21042L4

Purchased

No

100

Each

3,608.000

2

60

MS21042L 4

Locknut

DAS
36
9-89

16/03/20

Location

Loc Qty

Loc Code

FP001

41

m133363

41

GA

26

m127813

26

ST007

1500

m134055

1500

ST303

1944

m133769

1944

ST305

97

m130922

97

40

AN4-13A

Purchased

No

120

Each

452.0000

2

60

AN4-13A

Bolt

DAS
36
9-89

16/03/20

Location

Loc Qty

Loc Code

FG

20

122808

20

over003

50

m134039

50

ST344

382

m133998

382

M134167

40x

Picklist Print

January 26, 2016 11:48:47 AM

Page 3

Work Order ID: 140959

140959

Parent Item: D3278-041

D3278-041

Parent Item Name: Support Assembly

Start Date: 1/26/2016

Required Date: 2/5/2016

Start Qty: 30.00

Required Qty: 30.00

D2230-1

Manufactured No

120

Each

218.0000

2

60

D2230-1

Mounting Lug

16/03/30
DAS 36 9-89

Location

Loc Qty

Loc Code

FG

4

84136

4

ST521

114

115306

5

134015

9

140536

100

ST546A

100

138049

50

138586

50

B142540 (40x)

MS20426AD3-6

Purchased

No

120

Each

3,814.000

4

120

MS20426AD3-6

Rivet

16/03/30
DAS 36 9-89

Location

Loc Qty

Loc Code

GA

3814

M120123

390

M133988

3424

80

Picklist Print

January 26, 2016 11:48:47 AM

Page 4

Work Order ID: 140959

140959

Parent Item: D3278-041

D3278-041

Parent Item Name: Support Assembly

Start Date: 1/26/2016

Required Date: 2/5/2016

Start Qty: 30.00

Required Qty: 30.00

NAS1149D0463J

Purchased

No

120

Each

5,852.000

4

120

NAS1149D0463.J

DAS

36

9-89

WASHER

16/03/30

Location

Loc Qty

Loc Code

GA

397

M129390

41

M132035

356

ST260a

4000

M134039

4000

ST263

105

M133932

105

ST269

1350

M130799

361

M132317

101

M132677

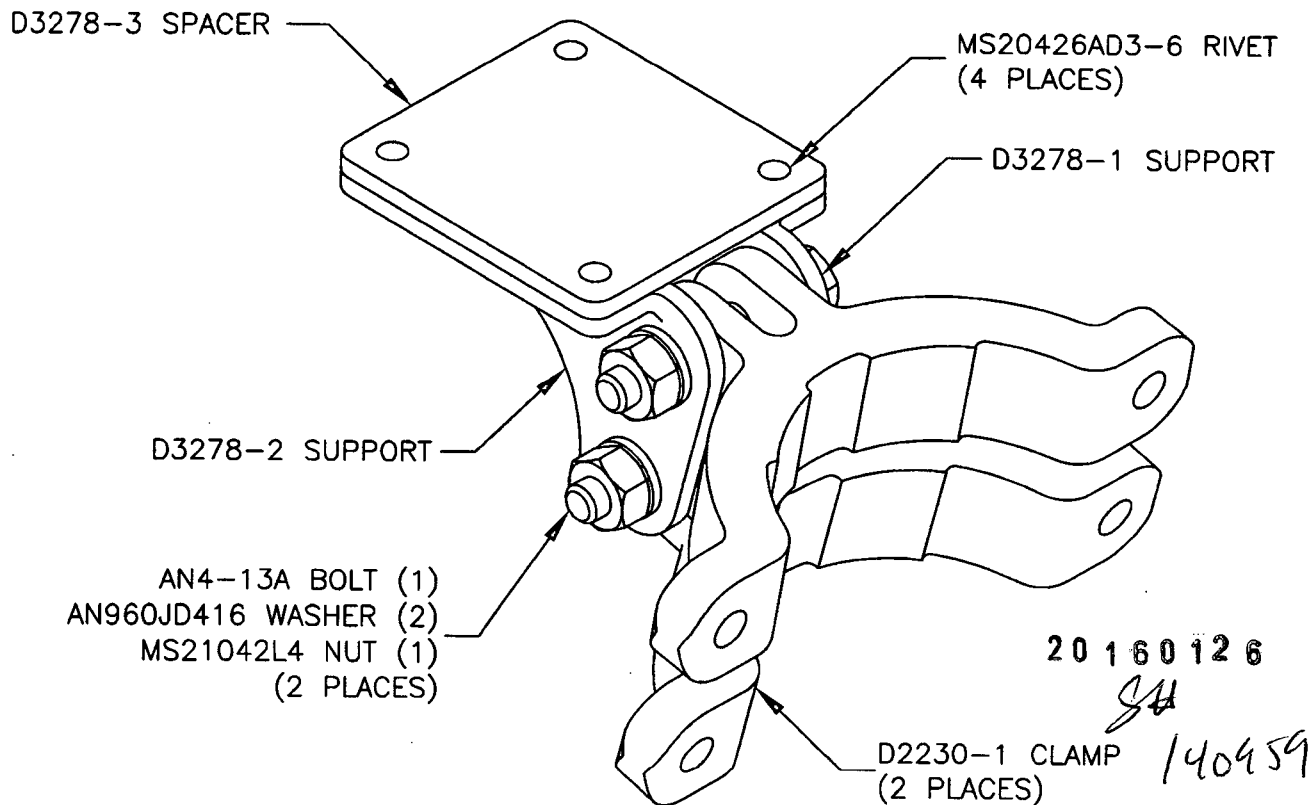
888



DESIGN 97	DRAWN BY JC	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3278	REV. C SHEET 1 OF 3
DATE 07.07.24		TITLE SUPPORT ASSEMBLY	SCALE NTS
A	04.03.03	NEW ISSUE	
B	05.03.31	CHANGE DIM/TOL TO ENSURE FIT	
C	07.07.24	CHANGED RIVETS PER PAR #185	

RELEASED
07-08-06

D3278-041 SUPPORT ASSEMBLY



Qty	Part Number	Description
X	D3278-041	SUPPORT ASSEMBLY
2	D2230-1	CLAMP
1	D3278-1	SUPPORT
1	D3278-2	SUPPORT
1	D3278-3	SPACER
2	AN4-13A	BOLT
4	AN960JD416	WASHER
4	MS20426AD3-6	RIVET
2	MS21042L4	NUT

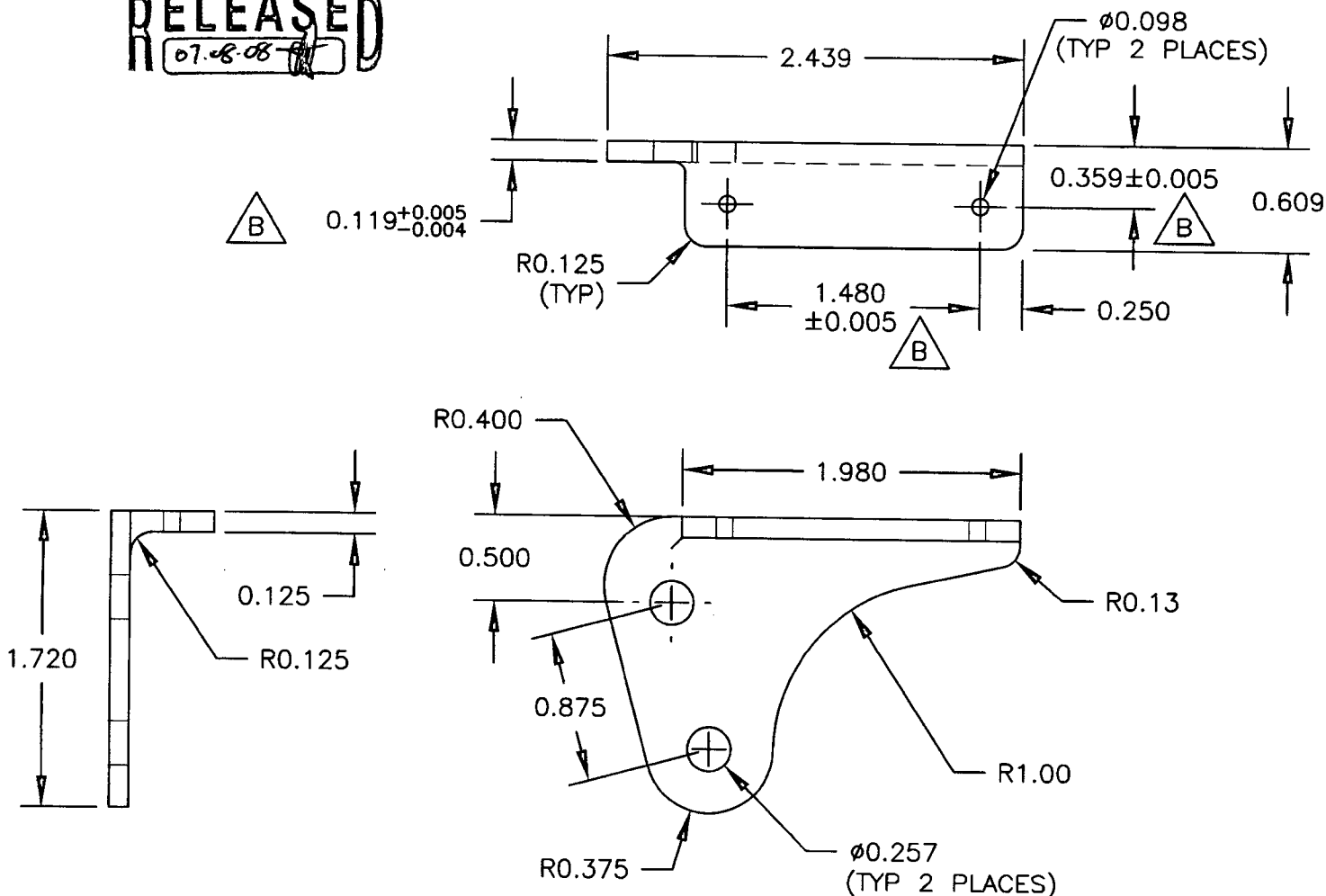
Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN <i>GP</i>	DRAWN BY <i>BC</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>B</i>	APPROVED <i>H</i>	DRAWING NO. D3278	REV. C SHEET 2 OF 3
DATE 07.07.24	TITLE SUPPORT ASSEMBLY		SCALE 1:1

RELEASED
07.08.08



D3278-1 SUPPORT (SHOWN)

D3278-2 SUPPORT (OPPOSITE)

- 1) MACHINE PER DWG FILE "D3278-1.SLDPRT"
- 2) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

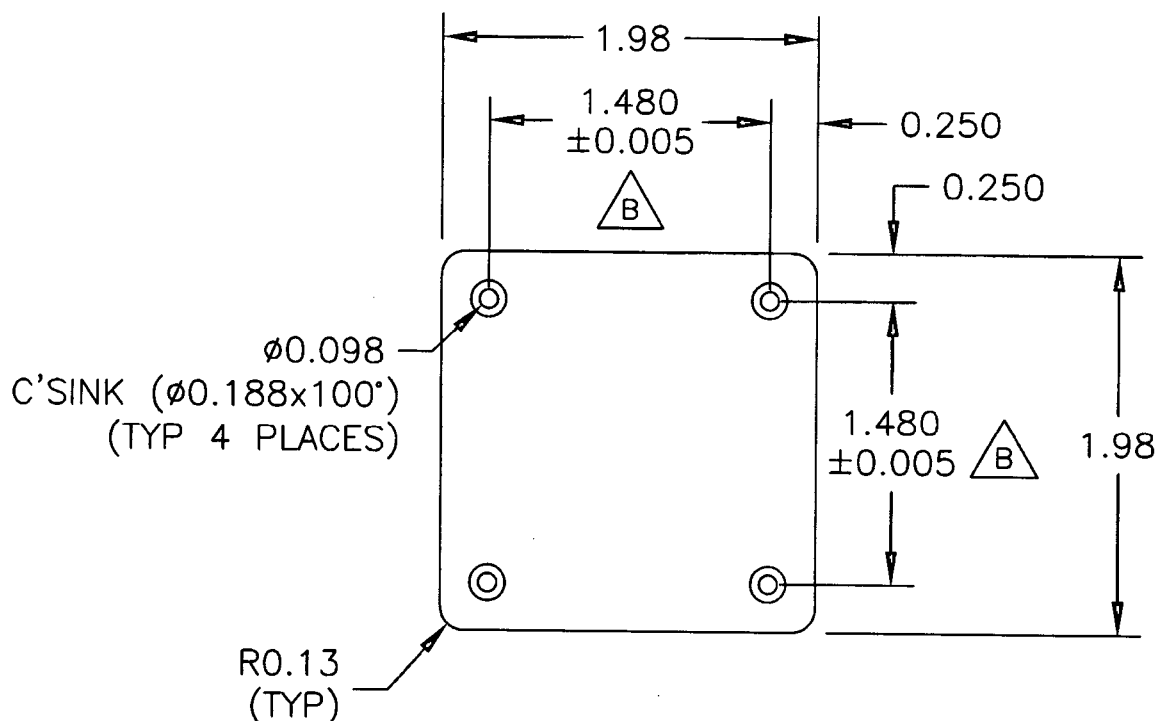
Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN <i>GP</i>	DRAWN BY <i>BC</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>B</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3278	REV. C SHEET 3 OF 3
DATE 07.07.24		TITLE SUPPORT ASSEMBLY	SCALE 1:1

RELEASED
07.08.08



D3278-3 SPACER

- 1) MATERIAL: DELRIN II 150E OR ACETRON GP ACETAL
(REF. DART SPEC. M-DELRIN-B0.125x2.000) OR
DELRIN II 150E OR ACETRON GP ACETAL
(REF. DART SPEC. M-DELRIN-S.125)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.